

CLAIMS

What is claimed is:

1. A chemical sealant device for repairing a flat tire of a wheel, which comprises:

a) a rim for supporting and fitting a tire thereabout;

b) means on the interior of said rim for carrying a portion of the load of the wheel after the tire is punctured and becomes partially flat; and

c) means within said carrying means, for releasing at predetermined intervals of rotation of the wheel, tire chemical; sealant and compressed air into the tire so that eventually the tire will be repaired and tire pressured will be at least partially restored, whereby road damage to the tire will be prevented.

2. A chemical sealant device for repairing a flat tire of a wheel as recited in Claim 1, wherein said carrying means includes an outer hollow torus member affixed onto the interior surface of said rim.

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2 *A1*  
3 3. A chemical sealant device for repairing a flat  
4 tire of a wheel as recited in Claim 2, wherein said releasing  
5 means includes:

6 a) an inner hollow torus member having dual side by  
7 side annular chambers, whereby said inner hollow torus member  
8 is disposed within said outer hollow torus member;

9 b) a first annular vessel placed into the first  
10 annular chamber of said inner hollow torus member, said first  
11 annular vessel holds the tire chemical sealant therein;

12 c) a second annular vessel placed into the second  
13 annular chamber of said inner hollow torus member, said second  
14 annular vessel holds the compressed air therein;

15 d) a first valve system connected to said first  
16 annular vessel, so that when said first valve system is  
17 activated by the rotation of the wheel it will release some of  
18 the tire chemical sealant into the first annular chamber of  
19 said inner hollow torus member and when said first valve system  
20 is deactivated by the continued rotation of the wheel it will  
21 release the tire chemical sealant from the first annular  
22 chamber of said inner hollow torus member into the tire to seal  
23 the puncture; and

24 e) a second valve system connected to said second  
25 annular vessel, so that when said second valve system is  
26 activated by the rotation of the wheel it will release some of  
27 the compressed air into the second annular chamber of said  
28 inner hollow torus member and when said second valve system is  
29 deactivated by the continued rotation of the wheel it will

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release the compressed air from the second annular chamber of said inner hollow torus member into the tire to at least partially restore tire pressure.

2x. A chemical sealant device for repairing a flat tire of a wheel as recited in Claim 3, wherein said first valve system includes:

a) a normally closed valve between said first annular vessel and the first annular chamber of said inner hollow torus member;

b) a normally opened valve between the first annular chamber of said inner hollow torus member and the interior of the tire; and

c) a valve stem connected to said normally closed valve and said normally opened valve and extending outwardly from said outer hollow torus member so that when the wheel rotates said valve stem will be depressed and released at the predetermined intervals.

1                   3 5. A chemical sealant device for repairing a flat  
2 tire of a wheel as recited in Claim <sup>2</sup>4, wherein said second  
3 valve system includes:

4                   a) a normally closed valve between said second  
5 annular vessel and the second annular chamber of said inner  
6 hollow torus member;

7                   b) a normally opened valve between the second annular  
8 chamber of said inner hollow torus member and the interior of  
9 the tire; and

10                  c) a valve system connected to said normally closed  
11 valve and said normally opened valve and extending outwardly  
12 from said outer hollow torus member so that when the wheel  
13 rotates said valve stem will be depressed and released at the  
14 predetermined intervals.

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16                   4 6. A chemical sealant device for repairing a flat  
17 tire of a wheel as recited in Claim <sup>3</sup>5, further including:

18                  a) a first inlet valve on the rim connected to said  
19 first annular vessel so that said first annular vessel can be  
20 filled with the tire chemical sealant;

21                  b) a second inlet valve on the rim connected to said  
22 second annular vessel so that said second annular vessel can be  
23 filled with the compressed air; and

24                  c) a third inlet valve on the rim connected to the  
25 tire so that the tire can be normally filled with air.